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PLANNING AND IMPLEMENTING CHANGE IN ONTARIO SCHOOLS. A REPORT OF THE COMMITTEE ON THE IMPLEMENTATION OF CHANGE IN THE CLASSROOM.

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DESCRIPTORS- EDUCATIONAL PLANNING, *EDUCATIONAL PRACTICE, *EDUCATIONAL INNOVATION, CASE STUDIES (EDUCATION), MODELS, RESEARCH UTILIZATION, RESEARCH AND DEVELOPMENT CENTERS, ELEMENTARY SCHOOLS, *TEAM TEACHING, INSTRUCTIONAL STAFF, *CONTINUOUS PROGRESS PLAN, SECONDARY SCHOOLS, GRADE 11, ANNOTATED BIBLIOGRAPHIES, *PUBLIC SCHOOLS, CHANGE AGENTS, TORONTO,

THIS PAPER ATTEMPTS TO BLEND EDUCATIONAL CHANGE THEORY WITH EMPIRICAL EVIDENCE. TWO CASE STUDIES WHICH ARE COMPOSITES OF MANY FIELD STUDIES ARE USED AS EXAMPLES. ONE CASE STUDY INVOLVES THE INITIATION OF A CONTINUOUS PROGRESS PLAN IN ELEMENTARY SCHOOLS, AND THE OTHER INVOLVES THE INITIATION OF TEAM TEACHING OF MATHEMATICS AND HISTORY AT THE ELEVENTH GRADE LEVEL. THE TWO STUDIES PROCEDE ALONG A THREE-STEP MODEL--(1) A METHOD OF ANALYSIS FOR EDUCATORS TO USE IN ASSESSING THEIR PRESENT SYSTEMS, (2) THE SEARCH FOR APPLICABLE INNOVATIONS, AND (3) THE IMPLEMENTATION OF THE INNOVATIONS. AN OUTLINE OF EXPERIMENTAL APPROACHES TO PLANNED CHANGE IN SCHOOL SYSTEMS IN BOSTON, CHICAGO, MICHIGAN, NEW YORK, AND PHILADELPHIA, AND A 29-ITEM ANNOTATED BIBLIOGRAPHY ARE APPENDED TO THIS REPORT. (HW)

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Committee Report

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PLANNING AND IMPLEMENTING CHANGE IN ONTARIO SCHOOLS

A REPORT OF THE COMMITTEE ON THE IMPLEMENTATION OF CHANGE IN THE CLASSROOM

OFFICE OF DEVELOPMENT
THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

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COMMITTEE MEMBERS, 1966 - 1967

*DR. J. H. M. ANDREWS
The Ontario Institute for Studies in Education, Toronto

MR. K. B. BURNHAM (Secretary)
The Ontario Institute for Studies in Education, Toronto

DR. D. H. CRAWFORD
Queen's University, Kingston

MR. D. M. GRAHAM
The Ontario Institute for Studies in Education, Toronto

DR. T. B. GREENFIELD
The Ontario Institute for Studies in Education, Toronto

MR. J. J. D. LONDERVILLE (Chairman)
Etobicoke Board of Education, Toronto

DR. K. F. PRUETER
The Ontario Institute for Studies in Education, Toronto

MR. D. C. D. SIFTON
Hamilton Teachers' College, Hamilton

MR. J. G. STERIOFF
Main Street School, Toronto

MR. A. E. VIRGIN (Principal Investigator)
The Ontario Institute for Studies in Education, Toronto

MR. G. E. WILEY
Barton Secondary School, Hamilton

* On his appointment as O.I.S.E. Coordinator of Research, January 1967, Dr. Andrews retired from the committee.

PREFACE

Accelerated growth in Ontario's school systems and rapid expansion of knowledge have created an active interest in educational change in schools and classrooms. Since professional educators are seeking ways to improve the quality of education through planned change, the Ontario Curriculum Institute, early in 1966, established a study of the process of change. The Committee on the Implementation of Change was formed to carry out the study.

The professional experience of the Committee, whose members are listed earlier in this report, spans every rank in public education from classroom teacher to director of education, every level from grade school to grad school, and includes practitioners in the fields of teacher education, research, and curriculum development. To supplement their experience the Committee commissioned Mr. A. E. Virgin to visit Ontario schools and classrooms where significant innovations had been attempted. In addition to considering Mr. Virgin's reports the Committee also studied current literature in this field and authorized the preparation of the selected and annotated bibliography that accompanies this report. The Committee viewed films and sound-filmstrips which recorded United States' experience with the dynamics of change, and listened to tapes prepared by authorities on implementation and diffusion of innovations. On one occasion the principal of a local school which had introduced new concepts of staff utilization presented to the Committee two films, taken five years apart, which demonstrated the nature of change.

As data on the change process accumulated it became clear to the Committee that there was a need in Ontario for a publication directed primarily at senior educators employed by local authorities, specifically, school principals, superintendents, and directors of

education. Innovators at this level consistently said they needed a practical guidebook which would help them to understand the change process. They attributed some failures in innovation to their own inadequate understanding of how change takes place. Available publications on change are often very theory-oriented and reflect non-Ontario experience. Such materials, perhaps in fear of oversimplifying a complex situation, steer clear of identifying the steps which have to be taken if a change is to have a reasonable chance to take root. The Committee believes that change of any consequence for schools succeeds only when senior officials recognize the part they and others play in the total process of innovation. This present publication tries to answer the need for a concise document which blends change theory with empirical evidence, including the Ontario experience.

There are two points which should be drawn to the reader's attention. It must be clearly understood that the two case studies reported in the main body of this report are composites, put together from the many field studies undertaken by the principal investigator. All names are fictitious but the events have their counterparts in reality. It must also be clear that the findings of this study indicate that <u>all</u> the steps outlined in the change process model are necessary. The omission of any step could reduce the innovator's control over the results of his efforts. The case studies and the change process model complement each other throughout the report.

In Chapter 2 the classroom and school are viewed as dynamic organizations where individuals and groups interact as they strive toward attainment of educational goals. The purpose of the chapter is to present a method of analysis for educators to use in assessing their

present systems. This method is applicable both to the single classroom and to all schools in Ontario.

In Chapter 2 focus shifts to the search for innovations. This activity can proceed almost simultaneously with analysis of the system. Although the analysis one makes of any school or classroom is coloured by an awareness of possible innovation, these two operations - analysis and search for alternatives - must be regarded separately in the initial stages. This reduces the risk of losing objectivity and breadth in the appraisal. In this chapter, the function of applied research and development is also discussed. Attention is directed to the assistance external agencies can give innovators within the school system.

Implementation of an innovation is traced in Chapter 3. The observations of the committee members, combined with the extensive literature on change, provided the material for this analysis.

An outline of several experimental approaches to planned change in school systems and an annotated bibliography are appended to this report.

CHAPTER 1: A VIEW OF TODAY'S CLASSROOMS AND SCHOOLS

Let us begin by quoting classroom teachers and principals in some of Ontario's more innovative schools.

- A person who is professionally interested in education cannot go into any Ontario classroom and say, "This is fine the way it is."

- First you have to take a look at your environment and decide what changes are needed.

- Communications between the people who can institute changes, and those who know what and where change should take place, have become lost or fouled up.

- There are better methods of organizing a school for the broad educational goals of today.

- Much in the curriculum is out-dated.

- The self-contained classroom does not offer the best opportunities for the individualization of instruction to meet the innumerable needs of our pupils.

- Most of the changes in the past probably produced short term gains but they failed to produce basic improvements in the schools.

These comments exemplify the attitude of responsible educators toward change. There is considerable interest in developing a process which will serve as a guide for continued improvement.

This process must begin in the schools. The following case studies, put together from observations of committee members and literature on the subject, reveal the nature and spirit of planned change. The first example shows how a team teaching program could develop in a typical school.

Mary MacDonald, browsing through an issue of the Canadian School Journal, was attracted by an article on team teaching. Several

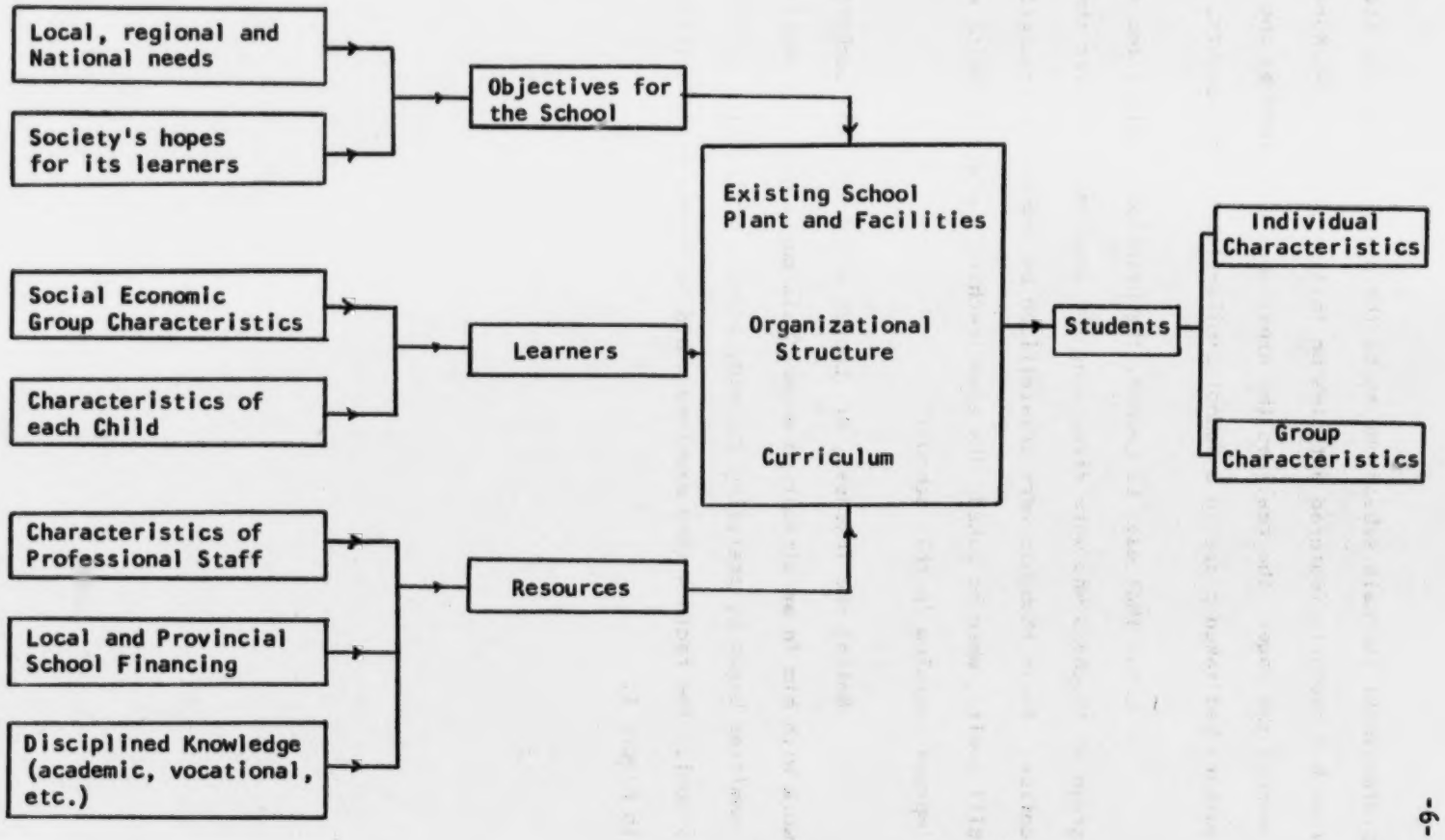
professional journals subscribed to by the principal for the staff room had recently featured articles on this innovation. As Mary scanned the pages, she realized the experiment described by the authors had taken place in a school similar to Ryerson Heights.

Later that day, Ed Louden, the principal, joined the small group of teachers who were discussing the team approach over their coffee. Their thoughts were crystallized by one of the teachers, Bill Hewitt, when he asked, "Is team teaching a practice which would improve learning in this school?"

Noting the interest, Mr. Louden asked the two teachers to work with him in an attempt to answer this question. The small committee began by analyzing the many aspects of learning in the school. The factors they examined could be framed as illustrated in Figure 1.

Figure 1.

Viewing a school as a system



As in all the schools of Forest Glen Village, Ryerson Heights was guided by a written set of goals reflected in the school's policies. The Committee agreed that the paramount objective, "to enable the student to discover and develop his own unique abilities, talents, and interests," was not being fully realized. Student records and anecdotal contributions of the staff showed clearly two factors which prevented attainment of the stated goal. First, there was a wide range of ability and interest among the pupils in each class and, second, each individual pupil varied in ability and interest from one learning skill to another.

When the Committee appraised the teaching staff, they also found a wide range of experience and qualifications. Teachers were not able to use their talents efficiently--many were distracted by non-professional tasks, while some would have preferred working with small groups of students selected on the basis of a common need or talent.

The material resources available to the school were typical of an urban Ontario community. The Committee then evaluated the school's graduating students and concluded that many of them could have been more active inquirers and have developed greater learning skills.

The Committee turned to an examination of the internal workings of the school. They reviewed the curriculum, physical facilities, and the grade and classroom structure. To give the Committee a broader view, Mr. Louden invited teachers, pupils, parents, and the local curriculum consultants and inspectors to give their opinions on these matters.

At the eighth meeting of the Committee, a decision was made to write a brief report of their findings and recommendations. When the report was circulated among the teachers and discussed at a staff meeting, the majority agreed that the school would be more flexible if an innovation, probably some form of team teaching, could be found to change the classroom structure and thus allow greater movement of students within each grade.

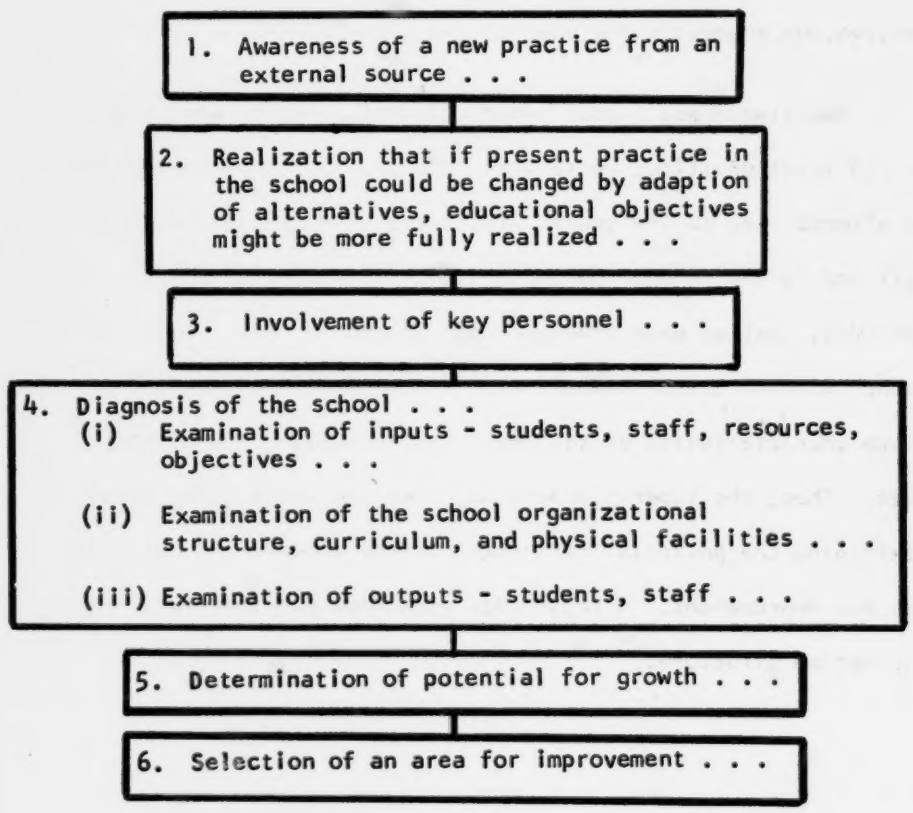
Hence, analysis of the school had long-range effects on Ryerson Heights.

The secondary school superintendent, Roger Anderson, was aware of the activity at Ryerson Heights and pleased to receive the formal report. At a meeting with Ed Louden and the two teachers, he assured them that the report would receive immediate consideration.

Let us summarize the steps in the case up to this point. Figure 2 illustrates the first stage of a process of planned change that may occur in an individual school or a school system.

Figure 2.

Steps in a Process of Planned Change (Stage 1)


1. Awareness of a new practice from an external source . . .
2. Realization that if present practice in the school could be changed by adaption of alternatives, educational objectives might be more fully realized . . .
3. Involvement of key personnel . . .
4. Diagnosis of the school . . .
(i) Examination of inputs - students, staff, resources, objectives . . .
(ii) Examination of the school organizational structure, curriculum, and physical facilities . . .
(iii) Examination of outputs - students, staff . . .
5. Determination of potential for growth . . .
6. Selection of an area for improvement . . .

These six steps are applicable at the local school system level. For example, a member of another school board learned that the usual grade structure in the primary and junior divisions could be effectively replaced by a continuous progress plan. He had become aware of the new practice through a report read at an educational conference. Realizing that the present practice in their schools could be changed and, he hoped , improved by adoption of an existing alternative, he suggested the idea to the superintendent.

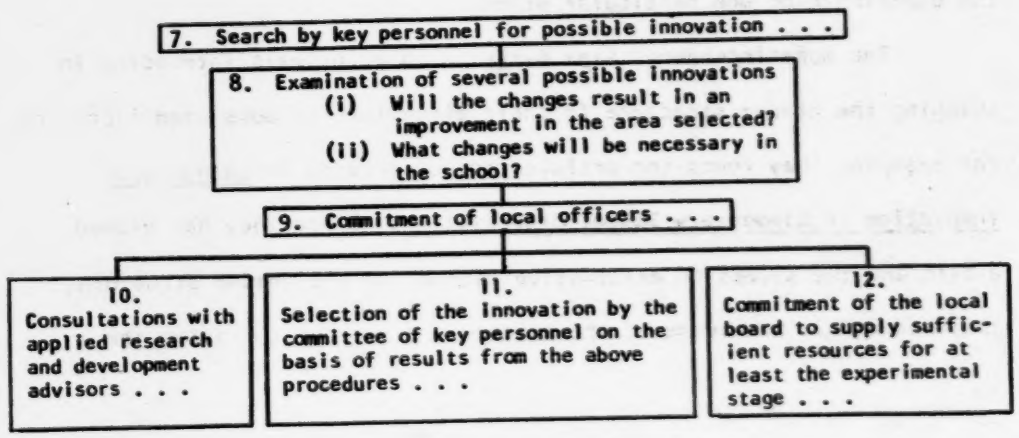
The elementary school superintendent, Alex Barker, showed a film and a set of slides to several principals as an illustration of two alternatives to the graded structure. The principals showed interest and agreed to analyse the system. An analysis of each school was included, just as each grade was considered for the single-school approach. Most of the principals agreed that modification of the lock-step characteristics of the grade system would benefit many children. Thus, the superintendent had involved several key personnel in determining the potential for growth of the schools and selecting an area for improvement. Arrangements were made for consideration of an alternative structure.

CHAPTER 2: INNOVATIONS AND DEVELOPMENTAL RESEARCH

Focus now shifts to the search for, and examination and selection of, possible innovations by key personnel. In the case studies cited in Chapter 1, both committees found an area which could be improved, and recommended that an improvement be made. The people who search for the right innovation and select it are called "key personnel". They are individuals within the system who provide the best possible conditions to implement the innovation. They may be teachers, principals, consultants, inspectors, or superintendents. They must include individuals from all levels. Both the teacher and the superintendent make a unique and essential contribution to the process. Membership in this group will grow and perhaps change during the process described, but individual involvement is essential. Before the case studies are continued, the steps in this second stage must be introduced.

Figure 3.

Steps in a Process of Planned Change (Stage 2)


7. Search by key personnel for possible innovation . . .
8. Examination of several possible innovations
(i) Will the changes result in an improvement in the area selected?
(ii) What changes will be necessary in the school?
9. Commitment of local officers . . .
10. Consultations with applied research and development advisors . . .
11. Selection of the innovation by the committee of key personnel on the basis of results from the above procedures . . .
12. Commitment of the local board to supply sufficient resources for at least the experimental stage . . .

Let us elaborate upon these steps by tracing the activities of the Ryerson Heights staff members. Superintendent Anderson informed Mr. Louden that the Committee could proceed, as the Board has approved the cost of the search for and examination of innovations. The first sources of information were professional journals and books. (See Appendix A, for notations on appropriate works.) These books are available from the library of The Ontario Institute for Studies in Education, one of the several Ontario libraries that are prepared to send a copy of journal articles, lend books, and suggest supplementary reports and articles. Mr. Louden and the two teachers spent several weeks collecting and digesting a wealth of material.

The second source of information consisted of visits to schools experimenting with team teaching. Five innovative schools were visited--one in the surrounding area, two in other Ontario communities, and two in nearby American schools. The visits were brief; the Committee found that a day, or even a half-day was enough to comprehend the idea and see teams in action. However, they realized a longer visit would be necessary if their plans were to be based on the experience of one particular school.

The superintendent, Alex Barker, and principals interested in changing the graded structure in their elementary schools used libraries. For example, they found ten articles on non-grading in Change and Innovation in Elementary School Organization. Since they had viewed a film and the slides on alternative methods to the graded structure, they had a fair knowledge of the concept and decided to review the

literature and visit schools simultaneously. Their visits and conclusions were similar to those of the Ryerson Heights team even though the schools and the innovations differed. Both groups found the following:

(a) They were not going to be able to simply transplant the innovation from the experimental school to their own.

(b) They saw as many variants of the innovations as schools visited, and these differed from the experimental programs described in the literature. The basic idea was evident in each.

(c) Resources allocated to an experiment also varied. For example, in an expanding suburb, an entire school building had been constructed for team teaching, while in an area with a stable school population existing facilities had been ingeniously adapted.

(d) Many changes, directly and indirectly related to the innovations, had been made in the schools.

(e) The schools had worked on plans and preparations for at least one year before the innovations were introduced. This period of time appeared to be a minimum, particularly if more than one school was involved.

(f) The changes had resulted in an improvement in the area selected. Quantitive measures were not available, but the visitors saw much to impress them. For example, although the Ryerson Heights staff was interested in the secondary level, they saw a Grade 2 team in action at a local elementary school. The large group instruction was aimed at stirring the interest and enthusiasm of the sixty pupils present. Slides and a demonstration of the actual implements used in processing maple syrup were used. The group was then divided into four. An advanced group were writing essays on the topic. Another group were concentrating on drawing skills using the lesson for inspiration, and a third were reading enrichment material. The fourth group was smallest because the children in it were selected on the basis of speech difficulties. All the children discussed the process, with each child contributing comments.

From these observations, the visitors realized that extensive changes would be necessary in their own schools and that the results of

the innovation would have to be determined in their own situation.

Based on their work to this point, the respective committees decided to seek the commitment of the local officers and the school board to the relevant experiment. Roger Anderson, the secondary school superintendent, again met with the innovators from Ryerson Heights. After much discussion, he agreed to visit a school recommended by Ed Louden and his teachers, where team teaching was organized in a manner similar to that envisaged for their school. He was impressed by his visit and the professional analyses of Louden and his staff. He decided to give the proposal his full support.

After consultation with applied research and development specialists, the four key personnel decided on the final form of the team teaching experiment at Ryerson Heights. The superintendent applied for and received a guarantee from the board that sufficient resources would be made available for a two-year trial of the innovation. A similar decision was made for the continuous progress approach sought by the second school.

Educational Research and Development

How do professional educators outside the local units view applied research and planned change? Here is a composite of their thoughts:

A main function of applied research and development is to assist teachers, consultants, and administrators by enabling them to make better decisions and to build better innovative programs. The knowledge gained from basic research in education is extensive and growing rapidly. As results are developed into practical designs and

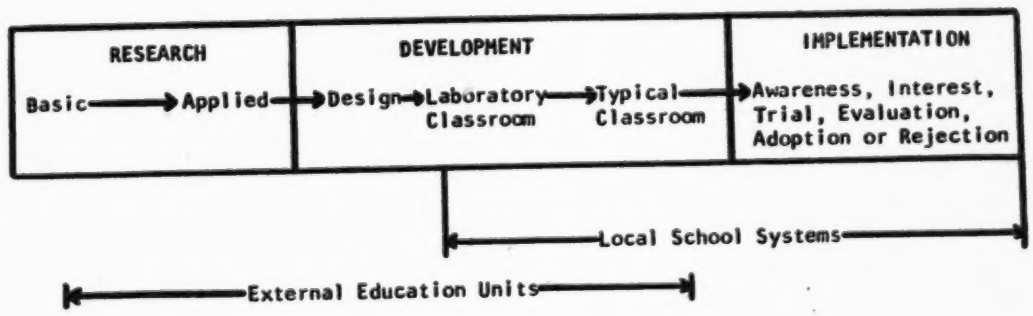
tried out in laboratory situations as well as typical classrooms, teachers and administrators who are inclined to try innovating will be faced with a variety of possibilities. This knowledge may best be made available through technical consultants who can be invited into the school. Groups and individuals may want to take advantage of the resources of The Ontario Institute for Studies in Education, the Department of Education, and the Ontario Teachers' Colleges.

As an example, a two-day workshop on team teaching at The Ontario Institute would bring together teachers and principals to discuss experimental programs in their schools and also give them an opportunity to consult with resource people, view team teaching films, select and read the latest literature available on the subject.

At this point we have shifted our perspective from within the school to an external position. The following diagram may be helpful:

Figure 4.

A Composite Model of a Strategy for Planned Change



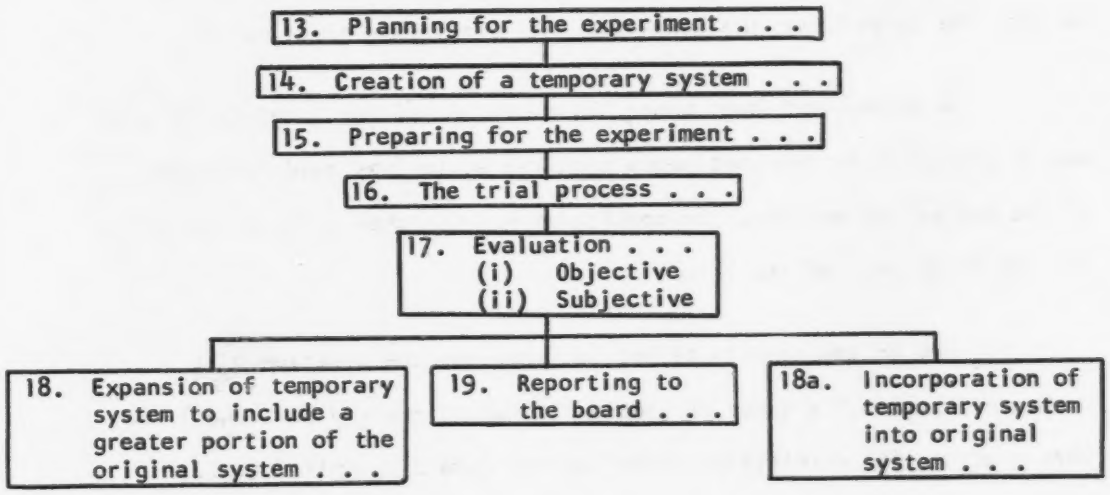
Research can, for convenience, be classified by the degree to which it applies to problems related to schools. The results of Applied Research which are most directly applicable can serve as a basis for designing innovations. The design is tested in the atypical atmosphere of a laboratory or pilot classroom, then by a series of trials in typical classrooms. The innovation may be modified and re-tested several times before it is ready for implementation in schools.

CHAPTER 3: IMPLEMENTATION OF INNOVATIONS

The process of a planned change outlined in this report has been separated into three separate stages. This chapter restricts itself to the steps in the actual introduction of a selected innovation, in an experimental trial. The seven steps in this stage are presented in Figure 5.

Figure 5.

Steps in a Process of Planned Change (Stage 3)


13. Planning for the experiment . . .
14. Creation of a temporary system . . .
15. Preparing for the experiment . . .
16. The trial process . . .
17. Evaluation . . .
(i) Objective
(ii) Subjective
18. Expansion of temporary system to include a greater portion of the original system . . .
19. Reporting to the board . . .
18a. Incorporation of temporary system into original system . . .

Elementary Schools Experiment

Superintendent Barker and the principals began planning for their experiment by selecting three schools for a non-graded primary program. They had decided that a three-year, continuous-progress plan based on reading and arithmetic achievement levels would be introduced. Two primary teachers from each school visited the experimental schools and assisted their principals in planning. Grades 1 to 3 teachers from the three schools were invited to a workshop in the late Spring. Here

a distinguished key speaker and a specialist associated with non-grading plans, from a university, provided valuable assistance. Films were also used to introduce the concept. The workshop ended with five committees of teachers and administrators preparing material for the trial. Each committee tackled a problem: pupil grouping, curriculum, facilities and resources, evaluation of pupil progress, reporting to parents and evaluation of the trial. There was much activity in the schools for the remainder of the year.

A newsletter kept parents informed of progress being made. This supplemented PTA meetings devoted to presentations and discussions between the parents and the educators involved in the experiments.

A second workshop, under the direction of the local coordinator and a specialist in the continuous-progress system, was held in August. At the end of the workshop the committees had finished their preparations for the first year of the trial.

One of the results of the workshop was the creation of a "temporary system," a group of people (including the key personnel) who work together for a relatively brief period toward a limited goal. Since these people work in an unhampered atmosphere, they can produce workable results that would be impossible if they did not separate themselves from their regular environment to some degree.

Once the trial began in September, the innovators concentrated their energies on the experiment, and modifications were based on their experience with the developing situation. Visits by observers were discouraged during the first two years of the trial. Emphasis was given

to press releases in local papers so that people from outside the area would not need to make visits, and parents and board members were kept fully informed. The first year passed quickly, and so did the second. Here are some excerpts from the report to the board in June of the second year:

> Although several modifications are still required, the trial is considered to be a success to date.
>
> Three different standardized tests show significant increases in the achievement level in first-year reading.
>
> June is no longer a critical month and the pressure to make children reach a specific standard beyond their capability has been reduced.
>
> The slow learners will take four years to cover the program, while rapid learners may take only two.
>
> The slow level has less stigma attached than failing did, and 90 % of the parents of these children have accepted the four-year period as reasonable.
>
> The interview-method of reporting to parents allows increased communication and insight, but it is time-consuming.
>
> More time has been spent on individual differences, but better use could be made of cross-grading and interchange between groups.
>
> Stimulation has been provided for curriculum development.
>
> Kindergarten should be included in the plan.
>
> Teachers find that, being surrounded by the graded structure and by traditional thinking on this subject both from within the school and from the outside, they continue to use graded practices in the non-graded situation.
>
> Objective and subjective measures of the trial suggest that inclusion of junior grades should be considered for the fourth year of the experiment.

RYERSON HEIGHTS

At Ryerson Heights, plans were made for the team teaching of mathematics and history at the Grade 11 level. Each team consisted of the department head (Mr. Hewitt and Miss MacDonald respectively) and

three teachers. The librarian and a teacher aide were members of both teams. The principal arranged for the team to view a team teaching film and an in-service program was conducted by a specialist from the nearby university. Using the group process, the teams learned to develop the technical skills necessary for the three types of teaching situation and also learned to work together as they put the idea into practice. They developed a timetable in which the Grade 11 mathematics and history classes would each meet at the same time three times a week. An afternoon a week for planning was requested by the committee of key personnel and approved. They prepared, and purchased where necessary, material for use in the large- and small-group instruction sessions. They converted a room adjacent to the library for individual study and saw to it that the library's collection was enlarged in the two subject areas.

The experiment in team teaching at Ryerson Heights was evaluated as having been successful, but with reservations, at the end of the first year. Academic achievement was slightly higher than the previous year for the students involved and the guidance counsellor reported no increase in adjustment or emotional problems in the groups. The teachers expressed approval of the resulting flexibility, particularly the small-group and individual instruction. They also appreciated being relieved of clerical duties. Evaluation of the pupils' progress and the program itself by a small group of teachers was less subjective than the individual teacher's evaluation. However, one disadvantage seemed to be that a greater amount of work was required for preparation than before and since four of the team teachers left the school (for reasons which

had no connection with the team), the second year would present a similar work-load problem. The evaluator from the university stated that more than one year would be required for evaluation. He noted that long-range experiments in California had shown that high school pupils who had been taught extensively with a team approach achieved noticeably higher university marks than a corresponding control group. The decision was made to continue the experiment the next year, but not to expand the number of teams.

This concludes a description of the case studies used to illustrate a process of planned change. The activities of the innovators at both secondary and elementary levels followed a similar path. This path is only one of many that could be created to form a model of planned change. This particular three-stage model has been developed to assist educators with the complex problems of innovation in today's schools. For that reason, the model has been based on the experience of teachers, principals, and superintendents. In addition to the members of the Committee, the contribution of several innovators from well-known Ontario schools gives some reality to the process. Many hours of tape recordings made in these schools and the extensive study of the literature on the subject have also contributed. With this model as a basis, the reader will find it profitable to compare the three-stage process with those of Appendix A. No model offers a panacea, but this model does suggest guidelines for the understanding of planned change.

APPENDIX A: CURRENT EXPERIMENTAL APPROACHES TO PLANNED CHANGE AT THE LOCAL SCHOOL SYSTEM LEVEL

In the past, planned change within schools has been frequently carried on using informal links with resources outside the local school system. Visits to schools conducting similar experiments and having specialists identified with the innovation assist people in their schools are common in this province. In this section, an outline of several more formal links will be suggested.

What are some of the possible relations between innovative schools and educational research and development organizations?

The first and most elementary relation should be providing service to all schools which request information. The identification of innovative schools whose experience would be helpful to those in the early planning stages is needed. The accumulation, translation and distribution of appropriate research reports and descriptive articles would assist educators in Ontario schools to make decisions about innovating.

Secondly, collaboration between schools and a research and development agency is necessary. A two-way flow of information would provide both parties with complementary insights. Educational research is not conducted in an ivory tower nor can local schools develop designs to implement and evaluate basic changes in isolation. This relation may take many forms.

In some cases, the control should exist mainly with the school. The developer gives advice on various aspects of the school's problem and suggests methods to study possible solutions.

In other situations, the schools use the research and development organization as a consultant. They turn the problem over to the agency and allow it to conduct an analysis. The resulting information is then fed back to the schools who can then act as they see fit.

Finally, the schools provide an opportunity for researchers to study their own problems. Data collected for this purpose may be of little direct use to schools yet is very important if we are to understand learning.

The following section is an outline of some actual approaches to planned change, and consists of excerpts from the June, 1966, SEC Newsletter of the Conference on Strategies for Educational Change. The newsletter describes the work, sponsored by a grant of the U.S. Office of Education, of the Cooperative Project in Educational Development (COPED). The purposes of COPED are to develop and study models of planned change in school systems. The development within school systems of self-renewing research and development functions to meet critical change needs will be a major outcome.

BOSTON STRATEGY

The comparative effects of two distinct strategies for utilizing university resources in helping school systems become more self-renewing will be tested in this project.

1. "Internal change-agent team training" conveys the essence of the strategy that will be tested with one group composed of three to six school systems. In this strategy, the several school systems will select teams consisting of two or three members from their staffs who will be relieved of approximately a quarter of their work load in terms of time to devote themselves to this project.

These teams will be brought together into a "seminar-clinic", at the university, from two to four times a month for the following purposes: (a) to explore the literature on theories of innovation and change; (b) to develop strategies for involving their respective systems in diagnosing needs for change and planning programs of change; (c) to practice the skills required for performing as change-agents for their systems; (d) to develop procedures for collecting evaluative data about their change programs; (e) to analyse their experiences collaboratively and to devise ways for giving one another mutual support.

2. "Direct intervention by university resources" conveys the essence of the strategy that will be tested with a second group of three school systems (probably including one in which the "system" consists of a single building). In this strategy, a member of the university staff will be assigned as a consultant to each system, with other members of the staff available, to be brought in as needed. The consultants will work with change-agent teams within these systems to devise strategies for involving the systems in diagnosing needs for change and planning programs of change; but the university personnel will themselves perform the primary change-agent roles, with school personnel (perhaps internes) under-studying and assisting them.

A number of sub-hypotheses, predicting the direction of these differences, will be constructed during the planning phase of the project. These will permit a research design to be developed that will result in generalizations about the conditions under which schools systems can best be helped to become innovative organizations by the use of university resources.

PHILADELPHIA STRATEGY

1. The first year project activities will involve building a cadre of interested principals, school psychologists, elementary guidance counsellors, and teachers who will be initiators and information sources in the several project school systems.

2. Attempts will be made next to re-structure roles, especially those of the principal, psychologist, and counsellor. The plan is to alter principal roles to include more support of the teacher's classroom inquiry and innovation, as well as more skill in maintaining and building staff morale. The school psychologist and guidance counsellor roles will be altered to include consulting, training and "linking".

Consulting will be done with individual teachers or small groups of teachers on classroom diagnosis, innovation practices, feedback, and evaluation. Training could include arranging discussion programs for principals and teachers to encourage growth, inquiry, and evaluation. "Linking" refers primarily to the function of bringing together several teachers to discuss classroom diagnoses, new effective practices and evaluation.

One of the core elements of the project is the training of action researchers in the schools. Such training will include ways of deriving action implications from research generalizations, ways of developing and using interviews and questionnaires, ways of analysing the data obtained, and ways of feeding back such data to principals and teachers.

CHICAGO STRATEGY

The plan is to develop an inquiry model. The conceptualization of the processes of change and of the policies for productive intervention

to increase effectiveness of these processes is the basis investigation in which the Chicago COPED team is involved.

Training goals which concern the training of change-agents and their training of school personnel provide the direct impetus for current attempts to develop short-term, in-service procedures for use with school personnel. The procedures are being developed according to the sequential inquiry model which Thelen has constructed over the past several years.

In addition a concentrated intervention has already begun which is designed to develop collaborative problem-solving capability in an established social system. Interventions include several pre- and post-intervention sessions designed to support an intensive eight-day workshop in late summer. Pre- and post- measurements will be taken in an effort to assess the impact of such interventions on adults in the school. Cross-role and cross-system (public school and university) collaboration is the essence of this intervention. The training goals are furthered, however, by virtue of the involvement of graduate students as trainees in the processes of planned change.

MICHIGAN STRATEGY

This strategy involves the university team in beginning to develop relationships with selected school systems in its region. Four kinds of relationships are envisaged. These are described as follows:

1. Information Affiliate System: The purpose of this affiliated relationship will be the active exchange of information concerning innovations of educational content, methodology, and models of change procedure between the school system and the COPED organization.

2. Diagnostic Affiliate System: The purpose of this affiliated relationship will be to provide opportunity to explore actively its

system needs, the kinds of resources needed for meeting those needs, and kinds of collaboration which could make such resources available. In addition, the COPED organization will make available to them instruments which they could use to conduct diagnostic inquiries within their systems. The system will be responsible for designing staff to take initiative in the use of these instruments for analysis of resulting data, and for seeking any desired consultation from COPED on the implications of such data. The system will also be responsible for helping to maintain a network of communication with other Diagnostic-Affiliate systems in order to explore mutual needs and the potential for mutually beneficial collaboration in utilizing resources to meet these needs.

3. Action-Research Collaborating System: An Action-Research Collaborating system will become an active member of the Michigan Region Team of COPED.

The purpose of an Action-Research Collaborating system is to support growth of a research and development function to facilitate the ability to diagnose continuously and meet the needs for change. The COPED university team will provide training of persons within the system to carry out the research and development function. A goal of the third year will be withdrawal of university-based support of the system in such a way as not to diminish the research and development function of the system; the system can then carry on autonomously.

The system will be responsible for committing four to eight teachers and administrators to serve part time as its change-agent team; this includes one person to act as team coordinator to work on diagnosing change needs and conducting change efforts within the system. An additional five teachers and principals in each system will be trained to apply

action-research skills in solving classroom and school building problems. They will also be taught how to train others to develop these skills. They will then provide this training for other teachers and principals in their systems.

An additional five teachers and principals in each system will be trained in the use of diagnostic and assessment instruments so as to aid their system's change-agent team in solving system level problems. All training will emphasize the utilization of scientific knowledge in problem-solving.

4. Control System: One system will be selected as a control. It will be roughly matched with one of the Action-Research Collaborating Systems as to size and the nature of the community served.

NEW YORK STRATEGY

The basic approach to be tested is a problem-solving process undertaken collaboratively by members of the school system and COPED staff. The COPED staff's role will be primarily to provide diagnostic insights and concepts relating to the process of change, and to supply consulting help as the process proceeds.

The initial focus of the process is on a group operating at a high level in the school system; the COPED staff intends to begin with the superintendent and his "cabinet". The major steps of the strategy will occupy approximately three years and are as follows:

1. Clarify expectations of the parties involved (the leader and members of the focal group, the board, other members of the system, and COPED staff regarding the purposes of the program, the probable time schedule, the amount of effort (dollars and time) likely to be required, role relations and responsibilities of COPED staff and organization members,

methods of collecting data for diagnosis and assessment, and use to be made of data including publication).

2. Collect information from system members, usually via interview and questionnaire. The data will be used both to aid diagnosis and planning by the focal group, and as a benchmark from which to assess progress.

3. Formulate the information obtained into a coherent form, which will show (for example) how goals, attitudes and beliefs in different groups in the system agree with or are discrepant from one another; and what problems most urgently need solution. These data are thus a kind of mirror in which to examine the state of the school system.

4. In a meeting off the job (a "temporary system"), the members of the focal group, using the data from step 3 as a springboard, examine their own current operations, work on problems shown in the data, and improve their own problem-solving effectiveness as a team.

APPENDIX B: ANNOTATED BIBLIOGRAPHY

Representative selections from recent literature and films on educational change reviewed by Brian Burnham, Mrs. Junette Douglin, Mrs. Ellen Tabisz, A. E. Virgin.

Part I - Books
Part II - Journal Articles
Part III - Films

Part I - Books

Bair, Medill and Richard G. Woodward. Team Teaching in Action. Boston: Houghton Mifflin Company, 1964.

The authors, both school administrators, base this book on their experiences with the Lexington Team Teaching Project. A thorough treatment is given to this teaching method: the definition, rationale, characteristics and resources. The emphasis of the book is that team teaching results in a 'better' type of instruction. The authors also discuss how the various schools in the county go about the complex task of trying to determine how to provide this form of instruction. Educators and laymen interested in establishing team teaching programs will find numerous examples of team teaching practices in this book.

Bennis, Warren G., Kenneth D. Benne, and Robert Chin, Editors. The Planning of Change: Readings in the Applied Behavioral Sciences. New York: Holt, Rinehart & Winston Inc., 1961.

This book has brought together some of the most thought-provoking practical writings about applying behavioral sciences to the problems of social change. The editors accept the inevitability of change but reject both laissez-faire and authoritarian approaches to dealing with it. The application of systematic and appropriate knowledge to human affairs for the purpose of creating intelligent action and change is considered. Part I provides an array of readings on the philosophical roots of planned change. Parts II and III theorize on the processes of such change. Part IV deals with programs and technologies.

Brickell, Henry M. Commissioner's 1961 Catalogue of Educational Change. Albany, New York: State Education Department, October, 1961.

A survey of changing instructional approaches and descriptions of new programs in the public and non-public elementary and secondary schools of New York State. A total of 296 new programs are reported in detail, with special emphasis given to those programs and materials developed through various national curriculum study groups.

Fraser, Dorothy M. Deciding What to Teach. (NEA Project on Instruction Report Series). Washington, D.C.: National Education Association, 1963.

This volume of the report deals with making curriculum decisions. Central to deciding what to teach is the decision-making process itself. This process is explored in some detail in an attempt to clarify both the nature of data sources for decisions and the roles of social and educational agencies in decision-making.

A 35 mm colour sound-filmstrip (18 minutes) summarizing this volume is available from the Association. See review in Part III.

Goodlad, John I. Planning and Organizing for Teaching. (NEA Project on Instruction Report Series). Washington, D.C.: National Education Association, 1963.

This volume of the report discusses the curriculum and the environment of teaching and learning. Specific recommendations are made about ways of organizing schools, classrooms, and instructional resources. The approach to organizational problems is diagnostic and the recommendations are specifically prescriptive.

A 35 mm colour sound-filmstrip (18 minutes) summarizing this volume is available from the Association. See review in Part III.

Hillson, Maurice. Change and Innovation in Elementary School Organization. Holt, Rinehart and Winston, Inc., 1965.

This book of selected readings focuses upon recent experiments with innovations in reorganizing the elementary school. The articles are written in a lucid style and cover many areas of interest. Although there are 18 articles on team teaching and nongrading, departmentalization, dual progress and grouping plans receive more than adequate coverage. The contributors range from classroom teachers to Robert H. Anderson and John I. Goodlad and the mixture gives the book a wide variety of discussions about the pros and cons of present innovations.

Leeper, Robert R., Editor. Curriculum Change: Direction and Process. Washington, D.C.: Association for Supervision and Curriculum Development, National Education Association, 1966.

The theme of the Association's 1966 Conference was "Strategy for Curriculum Change" and the four general session addresses are reproduced in this volume. The addresses by Goodlad, Hollister, and Broudy are essentially concerned with the content of change and display a strong humanistic bias. Lippitt presents a six-phase model for bringing change about and illustrates the tasks of a change agent charged with implementation of innovation.

Leeper, Robert R., Editor. Strategy for Curriculum Change. Washington, D.C.: Association for Supervision and Curriculum Development, National Education Association, 1965.

This collection of papers from an ASCD seminar will appeal to the innovator, especially the school superintendent, who does not have the time to examine the research behind these thoughtful and practical, easy-to-read pieces. Subjects considered include contrasts in strategies, roles and processes in effecting change, the role of social power in innovation, and diffusion of innovation. There are many references to studies of change in education and other fields in the footnotes and bibliographies that accompany the articles.

Lippitt, Ronald, Jeanne Watson, and Bruce H. Westley. The Dynamics of Planned Change. New York: Harcourt, Brace and Co., 1958.

This book considers the dynamics of the planned change process and cites examples of how change-agents have worked. The authors suggest that it is a comparative study of the principles and techniques which furnish the basis of the work of various types of professional helpers concerned with such change. Though no definitive answers are given or intended, an important contribution of this volume is the aid it offers the reader in conceptualizing the process of planned change and the various roles of the change-agent.

Lobb, M. Practical Aspects of Team Teaching. San Francisco: Fearon Publishers, 1964.

The writer states that the rigidity of ideas about class size and time-tabling are major obstacles to attaining the most effective learning situation, and that educators must learn to assess and accept new programs more rapidly. He urges greater teacher involvement in solving critical problems in education as one of the solutions for improvement of instruction.

McNally, Harold J. and others. Improving the Quality of Public School Programs. Bureau of Publications, Teachers' College, Columbia University, 1960. 331 pp.

This book examines seven school systems where educational programs of exceptional interest have been built. The authors provide four chapters of enlightening analysis of curriculum problems, principles and procedures. In the concluding chapter of the book they offer a summary and formulate guidelines and evaluation criteria, based on the seven curriculum program descriptions. The contributors who discuss the features of their respective programs are recognized leaders in school systems that vary in size, organization and geographic setting. Each gives attention to program objectives, means of initiation, organization procedures, personnel involved, as well as other essential considerations of interest to all concerned with program planning - curriculum specialists, administrators, and teachers.

Miles, Matthew B., Editor. Innovation in Education. New York: Bureau of Publications, Teachers' College, Columbia University, 1964.

This set of readings is addressed to a wide audience but particularly to those actually involved in educational innovation. A wide range of practice and ideas are presented and the reader can select specific chapters for close attention while omitting others. The focus is on features and consequences of change processes rather than on the content of a desired change. Actual experiences with innovation such as programmed instruction, 8 mm motion pictures and modern mathematics are presented in the form of case studies or research studies. Technical language used to present abstract ideas in some sections is balanced by a series of case studies dealing with actual changes in schools.

National Education Association Center for the Study of Instruction. Rational Planning in Curriculum and Instruction. Washington, D.C.: The Association, 1967.

Of the eight essays on curriculum and organizational change the last five in this volume are of special interest and value to the would-be innovator: "Guidelines for Reorganizing the School and Classroom" (Glen Heathers); "Guidelines to Help Schools Formulate and Validate Objectives" (Robert L. Brackenbury); "An Examination of Potential Change Roles in Education" (David L. Clark and Egon G. Guba); "Two Change Strategies for Local School Systems" (Henry M. Brickell); "A Model for Action" (Elizabeth C. Wilson). The annotated bibliography, Part IV, "Dynamics of Change" is theory-oriented.

Part II - Journal Articles

Brundage, Erven. "Our Love Affair With Change", Theory Into Practice, Vol. V. No. 2, (October 5, 1966).

Change for the sake of change itself, i.e., changing someone, something, curriculum, management, classroom situation without answering the question how and why we should change is senseless and yet prevalent. The author raises an important issue of evaluation by asking the question, "Is our posture toward change merely for the sake of change itself, or is education undergoing a rapid and truly upgrading kind of transformation?" The writer falls into his own trap, by making evaluation about specific changes without reference to very tangible evidence.

"Change: Unlocking the School". Educational Leadership, XXIV, 8 (May, 1967).

The articles, features, and editorials of this issue champion the liberalization of school programs and organization in order that they may be more responsive to the changing conditions of the times. Although most pieces treat somewhat microcosmic matters (e.g., a specific teacher education program) some of which are not generally of interest to Canadian educators (e.g., desegregation), attention is also given to theory (Carl Rogers on self-directed change, Leslee Bishop on systems approach to change) and to topics of universal appeal (e.g., program flexibility, information systems and resource centres in relation to a school program).

Chase, Francis S. "New Conditions Confront Education", School Review, 65, 3-11, 1957.

The author shows that education must keep up with societal changes. He lists five factors which make the task of the schools more exacting than ever before. The author suggests four steps to re-examining the problem: (1) a thorough-going re-examination and revision of the sequences of learning experiences provided in our schools and colleges; (2) the preparation of teachers who combine sound scholarship in their teaching fields with an understanding of the processes of human development and learning and who possess skill in motivating learners for high achievement; (3) research in methods of instruction and experimental tryouts of promising ideas; (4) redesigning the administrative structure and improving administrative leadership.

Culberston, Jack, Editor. "Changing the School", Theory into Practice, 11, 5, (December 1963).

This entire issue is addressed to administrative personnel in schools and school systems who are most strongly affected by change. All of the five articles in the issue seek to illuminate aspects of the change process. The authors, representing such diverse fields as educational administration, psychology, social psychology and sociology, set forth implications for managing and fostering educational change. Most of the research findings presented in the issue are taken from studies of educational change in elementary and secondary schools. Articles are: "What are Innovators Like?" by Everett M. Rogers; "Barriers to Change in Educational Organizations" by Donald J. Willower; "Why Do Teachers Reject Change", by Gerhard C. Eichholz; "The Principal's Role in Facilitating Innovations" by Mark Chester, Richard Schmuck and Ronald Lippitt; "The Elementary-School Principal and Change in the School System" by Daniel E. Griffiths.

Cunningham, L. "Viewing Change in School Organizations", Administrator's Notebook, (The University of Chicago), (September, 1962).

The writer points out that the administrator needs among other things, a 'kit of tools' to assist him in understanding the phenomenon 'change' and to permit him to create, accelerate, or control change in his school organization. Four major concepts - social system, change-agent, diagnosis and intervention - are tools for understanding change. The administrator's role in change is discussed.

Cunningham states that concepts are only tools, however. When concepts are clearly defined they can serve a system of ideas thus serving not only the change-agent, but the researcher as well.

Downey, Lawrence W., "Direction Amid Change", Phi Delta Kappan, 42: 186-91, (February, 1961).

In this article, the author predicts that genuine educational change must be on the way. Since change is inevitable, we ought to prepare for it and make the best of it. The author establishes guidelines by showing the way in which the educational system should be directed and re-directed during the course of change. Certain precautions which the innovator has to consider in planning for change are outlined.

Fritz, John. "Educational Technology: A Way to its Assessment", Administrator's Notebook. (The University of Chicago), IX, (February, 1961).

The author points out that the administrators must view educational technology (instruction by machine) and its potential role in the instructional program in terms of the total educational enterprise. "Instruction by machine" can be used in a complementary manner, relieving teachers from exposition, repetition and duplicating their tasks, and enabling them to specialize in new emerging roles, thus becoming more instrumental in influencing students' perceptions, decisions and actions, through more personalized interaction with the individual learner.

Holt, H. B. "The Educational Uses of Change", Phi Delta Kappan, XLVI, 4 (December, 1964). 188-89.

Attention, encouragement and recognition given to teachers by persons outside the classroom during the introduction of new programs are among the strongest causes of their success. Holt makes three suggestions. Teachers should have all possible opportunities to learn of new developments and to examine rigorously the worth of their own programs. This can be done by availability of materials, describing new programs, intervisitation among teachers in various school systems, attendance at summer or school year workshops and institutes and bringing in missionaries for new programs. Second, the success of new programs depends on acceptance by the teachers. This is unlikely if the program is planned entirely in the education center. Finally, the administration must give all possible support to reasonable experimentation in terms of staff, facilities and time.

Ingram, E. J. "Creating Readiness in the Staff", In Organization, L. W. Downey, Editor. Edmonton, Alberta: The Policy Committee Leadership course for School Principals, 1962, 138-156.

Creating readiness in the school staff for instructional and organizational change is primarily an exercise in human relations. Ingram's thesis is that creating readiness for change is a continuous process, and therefore, should be a part of our overall administrative philosophy. Change is discussed under three major headings: (1) resistance to change; (2) overcoming resistance to change; and (3) initiating change.

Kowitz, Gerald T. "The Change and Improvement of School Practices", Phi Delta Kappan, 42: 216-19, (February, 1961).

The author states that education is facing great change. If the professional educator is not willing to provide leadership it will be sought elsewhere. The past years, while they have seen many superficial changes, have not seen the introduction of new concepts, either in methodology or curriculum content. The author looks at conceptual models which become devices for introducing change. When the model is devised, adequate managerial checks must be placed on it. The administrator is not allowed to choose between change and no change, but he can choose a process of mediating improvement.

Watson, Goodwin. Editor. Concepts for Social Change and Change in School Systems. Washington, D.C.: National Training Laboratories, National Education Association, 1967.

These companion volumes are produced by the Co-operative Project for Educational Development (COPED) which is funded by U.S.O.E. for "the exploratory development of models of planned change in education." Concepts for Social Change attempts to "develop the core ideas about planned change" that led to COPED, e.g., resistance to innovation and a strategy for planned change. Change in School Systems focuses attention on the properties and processes of schools and on strategies intended to test and develop the core ideas of the COPED program. These working papers by many prominent educators and social scientists active in this field represent a wealth of practical experience, but are apparently aimed primarily at the scholar studying the change process rather than practitioners such as the school principal or superintendent.

Part III - Films

"Deciding What to Teach". 35 mm, colour, sound-filmstrip. 18 min. National Education Association, Washington, D.C.

This film reports on the NEA study dealing with making curriculum decisions. Central to deciding what to teach is the decision-making process itself. This process is explored in some detail in an attempt to clarify both the nature of data sources for decisions and the roles of social and education agencies in decision-making.

See also Fraser, Dorothy M. Deciding What to Teach. (NEA Project on Instruction Report Series). Washington, D.C.: National Education Association.

"Overcoming Resistance to Change". 16 mm, colour. 35 min. Roundtable Films Inc., 321 South Beverly Drive, Beverly Hills, California.

This film deals with specific problems in the area of change: why people resist change; the nature of the resistance to change; and how it can be overcome. The writer points out that the fundamental principles by which we can understand resistance to change are not specific to any individual or to any situation; they apply equally to all kinds of change. Even though change may seem entirely reasonable, logical and desirable, it is the impact that it has on human beings which causes resistance. To assist those involved, adequate preparation should exist.

"Planning and Organizing For Teaching". 35 mm, colour sound-filmstrip. 18 min. National Education Association, Washington, D.C.

This film reports on the NEA study of the curriculum and the environment of teaching and learning carried out in the early 1960's. Specific recommendations are made about ways of organizing schools, classrooms, and instructional resources. The approach to organizational problems is diagnostic and the recommendations are specifically prescriptive.

See also Goodlad, John I. Planning and Organizing for Teaching. (NEA Project on Instruction Report Series). Washington, D.C.: National Education Association.

"Team Teaching on the Elementary Level". 16 mm, sound, colour. 14 min. Bailey Films Inc., 6509 De Longpre Avenue, Hollywood, California 90028.

Team teaching is described as a way of using the teachers more efficiently to the best of his or her ability. This is initiated by educators who are interested in improving their school program. This film explains the aim and methodology of team teaching tracing the development of an experimental project from theory to practice and demonstrating its feasibility in the elementary schools. This film shows the motivations, plans and details involved in achieving the new teaching method, including an extensive summer workshop for teachers at a central college of education. At this workshop, teachers work together to develop guidelines, preparing curriculum materials, and deciding upon the duties of the team members. This method calls for a well planned program of instruction, allowing each teacher to spend her time more efficiently. The conclusion reached was that the idea is feasible - team teaching can operate in any school building. Morale on the team was high, pupil achievement and motivation was high, and parents were enthuasiastic.

"The Child of the Future: How Might He Learn". 16 mm, sound, black and white. 58 min. National Film Board of Canada, P.O. Box 6100, Montreal 3, Quebec.

The content of educational change is brought into focus as Dr. Marshall McLuhan discusses how the child of the future may learn. He advocates the total sensory involvement of the human being in the learning process. Many experiments in the U.S. and Canada are shown and explained and comments by Dr. Jerome Bruner and O. K. Moore, classroom students and teachers complement the narrative.

McLuhan says that our present adult world is composed of fragmented people whose learning has made them specialized and departmentalized. In contrast, the world itself and our present technology require people who are totally involved. The classroom should therefore become a laboratory where the student is a physicist rather than an observer, reading books and viewing film strips only after he has performed actual experiments. Thus, children can have a more meaningful and congenial type of learning.